NATIONAL ORGANIC STANDARDS BOARD
BIOTECHNOLOGY POLICY

The National Organic Standards Board recommends that the class of genetically engineered organisms and their derivatives be prohibited in organic production and handling systems. Genetically engineered is defined as: Made with techniques that alter the molecular or cell biology of an organism by means that are not possible under natural conditions or processes. Genetic engineering includes recombinant DNA, cell fusion, micro- and macro-encapsulation, gene deletion and doubling, introducing a foreign gene, and changing the positions of genes. It shall not include breeding, conjugation, fermentation, hybridization, in-vitro fertilization and tissue culture.

SEPTEMBER 1996

NOSB meeting - September 19, 1996

Task Force report: on Biotechnology

- Please keep in mind that no materials list decision made by the NOSB is permanently final and that all decisions must be re-reviewed within any given (5) year period, in order to meet the requirements of OFPA. And that the current NOSB position is that this whole category of technology is considered synthetic and therefore must pass the NOSB allowed synthetic screening process to be placed on the National List.

The task force recommends that:

1. The NOSB insert the following sentences into its recommendations for organic handling plans - **ADD** - "To the best of your knowledge has this food or fiber product, or any of its processing aids or ingredients been produced, manufactured or altered by any genetic engineering technologies? Is this the progeny or product of any genetically engineered organisms?"

2. And in the TAP review questionnaire - **ADD** - "To the best of your knowledge are any forms of this material being produced or manufactured through any genetic engineering technologies? Is this material the product or progeny of a genetically engineered organisms? If so please provide information concerning its compatibility with enclosed seven criteria".

3. We also request that the NOSB materials committee develop additional guidance language for the board and the TAP reviewers to help evaluate the appropriateness of this class of materials, such as the material's potential novel gene transfers, etc.

4. We also request that the NOSB investigate the usefulness of any biotechnology test that become commercially available as a requirement similar to the residue test requirements in cases where the product in question is suspected of alteration (either in the field or post harvest) in order to provide full consumer transparency and disclosure, which are hallmarks of organic integrity.

5. We also submit the following breakout categories of possible genetically engineered products to the NOSB for your consideration in order to better define and focus our deliberations concerning which of these possible subsets the NOSB would deem compatible with a system of organic and sustainable agricultural production and processing.

September 19, 1996

Categories of Genetically Engineered Organisms and Their Products
(Genetic engineering considered to include all artificial gene transfer processes that are capable of moving functional genetic material without regard to natural reproductive barriers.)

1. **Genetically Engineered Livestock**

Examples:
Animals Engineered For Leaner Meat
(Early research to produce such pigs terminated because of unacceptable side effects, e.g., low fertility, arthritis, impaired immune systems.)

Animals Engineered As Drug Production Facilities
Goats and sheep engineered to secrete bioactive molecules into the blood, urine or milk of animals. The animals could be slaughtered for food after they are no longer useful for drug production.

Animals Engineered As Sources of Transplant Organs
Pigs are being engineered so that their organs would not be rejected by human transplant recipients. Carcasses of donor pigs could be used as food.

2. **Genetically Engineered Poultry**

Examples:
Chickens or turkeys engineered for faster growth
(No research has been publicized attempting to engineer poultry, although it is certainly technically possible.)

3. **Genetically Engineered Fish and Shellfish**

Example:
Fish Engineered for Aquaculture
Salmon engineered to reach table size more rapidly.

4. **Genetically Engineered Plants Eaten Whole As Food**

Examples:
Vegetable Whole Foods
Tomatoes and squash engineered for long shelf life or herbicide-tolerance.

Commodity Food Crops
Corn and soybean engineered for herbicide and insect-tolerance.

5. **Genetically Engineered Fiber Plants**

Example:
Cotton engineered for herbicide-tolerance.

6. **Food Products Made From Genetically Engineered Plants**

Examples:
Cotton seed oil or canola oil made from genetically engineered cotton or canola.

7. **Engineered Insects Used in Agricultural Systems**

Examples:
Honeybees and other beneficial insects engineered to tolerate pesticides.

8. **Engineered Microorganisms Used in Foods**

Example:
Engineered Brewer's Yeast

9. **Engineered Microorganisms Used As Inputs Into Agricultural Systems**

Example:
Bacteria engineered to kill or repel pests and increase nitrogen fixation.

10. **Food products made with engineered bacteria**

Example:
Cheese made for milk treated with rennet made from genetically engineered bacteria (chymosin).

11. **Food products from organisms treated with products made from genetically engineered bacteria**

Examples:
Milk from cows treated with BGH made from engineered bacteria.